MSHA's Accident Prevention Program
Innovative Products

Safety and Health are Values!

Welding Voltage Reduction Devices

Anyone who has burns rods as a welder could receive an electrical shock when replacing the rod in the stinge wear worn or damp gloves, or foolishly, no gloves at all, you may get an eye opening experience. Under the conditions, severe burns and electrocutions could result.

Devices are available to eliminate this hazard. A Voltage Reduction Device (VRD) is a product that assists in the reduction of electrical shock to personnel involved in welding activities. It reduces open-circuit voltage (OCV) to a safe value before and after the welding operation. Upon arc strike, full selected voltage becomes available. Upon completion of welding, the open-circuit voltage is returned to a safe value until the next welding cycle.

MSHA Technical Support investigated two models of voltage reduction safety devices for use with arc welders. The investigations consisted of checking electrical measurements against the manufacturers' specifications, and conducting performance tests to determine their improve welding safety. These devices were found to limit the maximum unloaded open-circuit voltage to a with little noticeable difference while actually welding.

For information on manufacturers that are known to MSHA to have such products available, contact MSHA' and Certification Center at 304-547-0400 or e-mail InnovativeProducts@dol.gov.

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